

G. L. WILKINS.
CASEMENT WINDOW ADJUSTER.
APPLICATION FILED DEC. 14, 1908.

961,565.

Patented June 14, 1910.

3 SHEETS-SHEET 1.

Fig. 1.

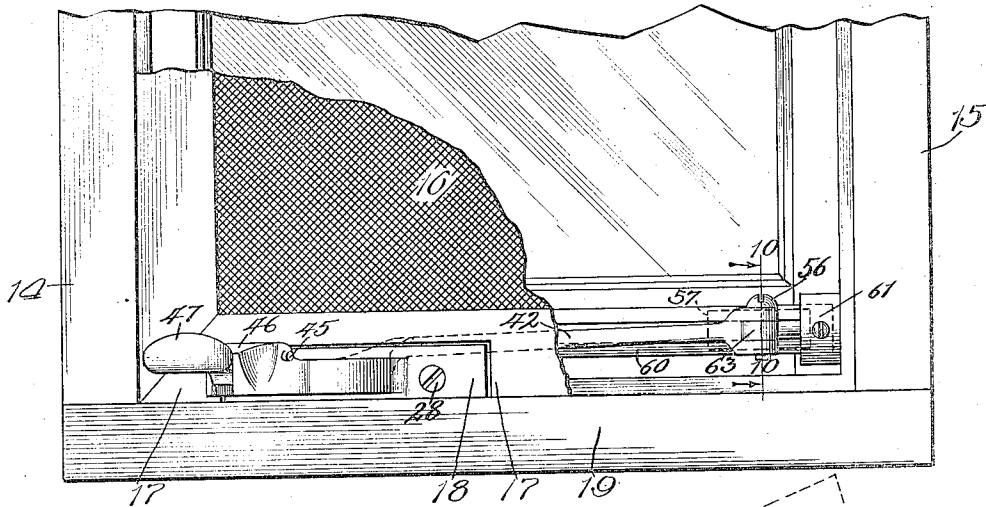
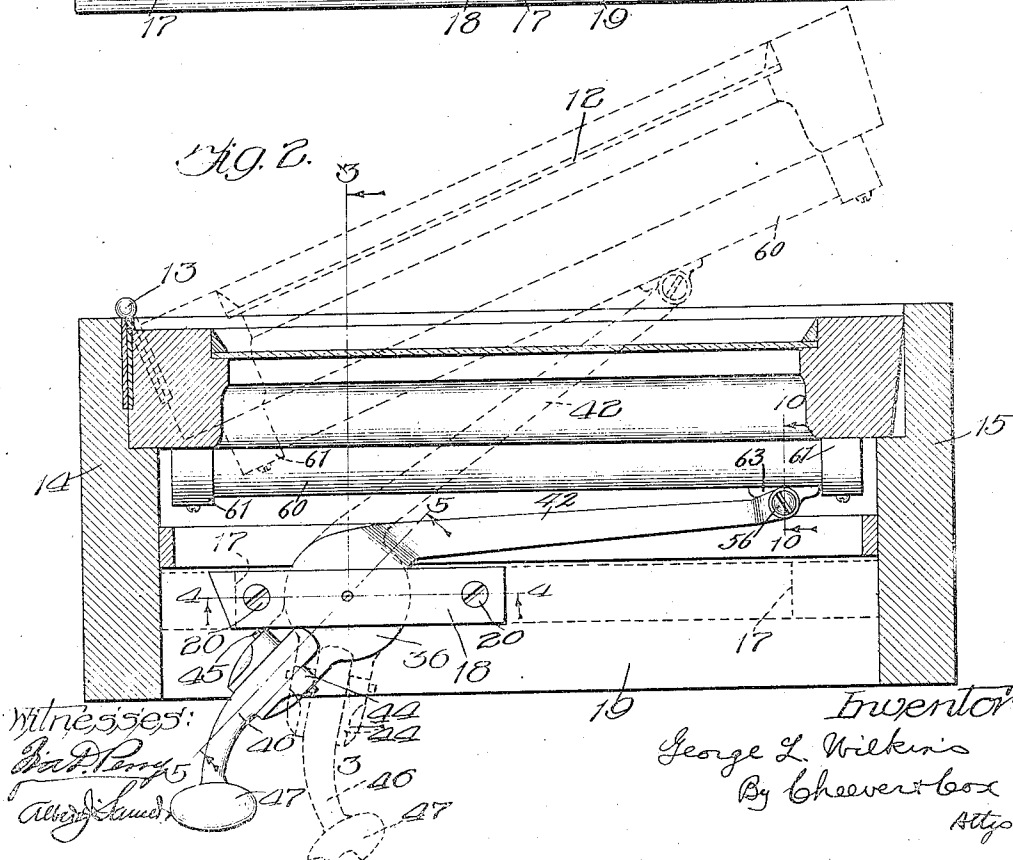


Fig. 2.



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3 SHEETS—SHEET 2.

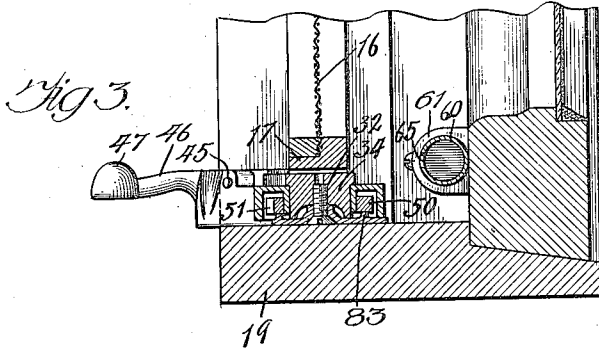


Fig. 9.

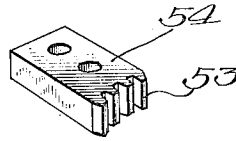


Fig. 10.

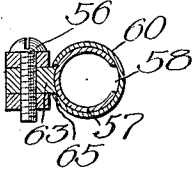


Fig. 4.

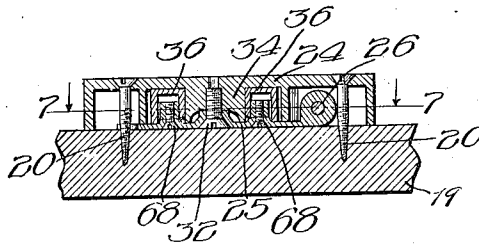


Fig. 7.

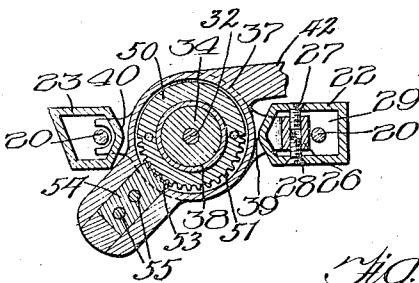


Fig. 8.

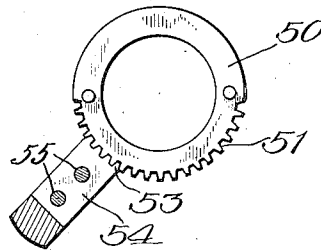


Fig. 5.

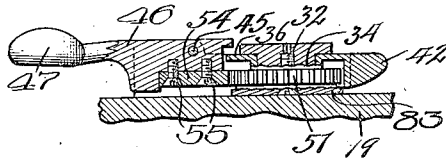
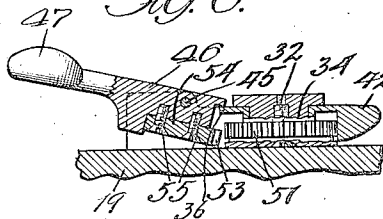


Fig. 6.



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3 SHEETS—SHEET 3.

Fig. 11.

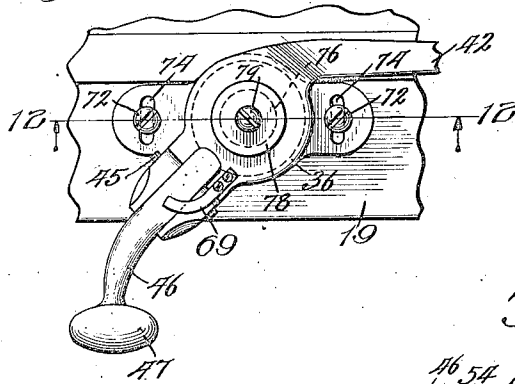


Fig. 14.

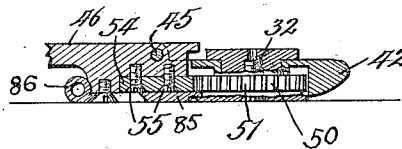


Fig. 12.

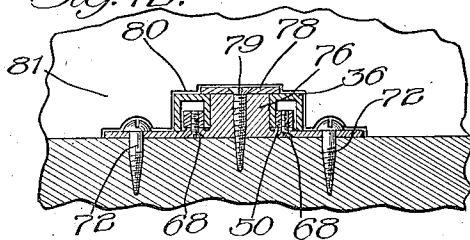
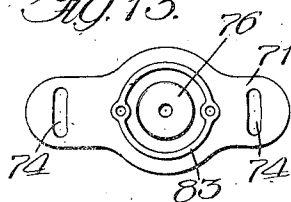


Fig. 13.



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UNITED STATES PATENT OFFICE.

GEORGE L. WILKINS, OF CHICAGO, ILLINOIS.

CASEMENT-WINDOW ADJUSTER.

961,565.

Specification of Letters Patent. Patented June 14, 1910.

Application filed December 14, 1908. Serial No. 467,427.

To all whom it may concern:

Be it known that I, GEORGE L. WILKINS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Casement-Window Adjusters, of which the following is a specification.

This invention relates to mechanism for adjusting casement window screens or shutters from a point inside an inner window or screen one form of which is shown and broadly claimed in my United States Patent No. 866,703, issued September 24, 1907.

The object of this invention is to provide a device which retains the feature of excluding insects present in said prior patent and improves upon it by providing an improved locking mechanism and window operating lever adapted to be operated by one hand of the user and be locked by gravity at any desired position.

A further object of the invention is to provide means for adjusting the position of the locking mechanism so that in the event of the device being improperly applied so that the window controlled by the device does not close quite tightly or closes a little too tightly adjustment may be made to bring it to proper position.

A further object of the invention is to provide mechanism by which the operating lever engages the outer or casement window in a non-rattling manner, this without interfering with the ready operation of the mechanism.

A further object of the invention is to provide a locking mechanism concealed within the lever itself adapted to lock the lever in any desired position.

The invention consists in a simple mechanism capable of carrying out all of the foregoing objects which can be easily and cheaply made and installed and is not readily liable to get out of order.

It also consists in other details of construction which will be hereafter more fully described and claimed as the specification proceeds.

Referring to the drawings, Figure 1 is a front view of a window frame the window or screen and a casement window having the device of this invention applied thereto. Fig. 2 is a plan view of the parts shown in

Fig. 1, showing in full lines the casement window in closed position and in dotted lines said window partially opened. Figs. 3, 4 and 5 are vertical sectional detail views on the lines corresponding to the same numerals in Fig. 2. Fig. 6 is a detail view corresponding to Fig. 5 showing the operating lever in unlocked or movable position. Fig. 7 is a detail plan view on the line 7-7 of Fig. 4. Fig. 8 is a detail plan view of the locking pinion. Fig. 9 is a detail perspective view of the locking block or latch. Fig. 10 is a sectional detail view through the mechanism for securing the lever to the casement window taken on the line 10-10 of Fig. 1. Fig. 11 is a plan view of a simplified form of the device. Fig. 12 is a vertical sectional view taken on line 12-12 Fig. 11. Fig. 13 is a detail view of the adjustable base plate. Fig. 14 shows a supplemental locking device or plate which may be used for locking the mechanism heretofore described so that burglars may not readily operate the device should they break the glass for this purpose.

As heretofore stated the device is adapted for opening an outside casement window or screen 12, hinged at 13 to the window frame 14, from the opposite side of an inner window, or screen 16, without permitting the entrance of insects through the inner window or screen 16. The stronger preferred form of the device is shown in Figs. 1 to 10 inclusive while a cheaper form is shown in Figs. 11-13. In order to do this with the preferred form of device, a notch 17 is cut in the frame of the window or screen 16 to allow the insertion of the block 18 secured to the window sill 19 by means of the screws 20 or other suitable mechanism and through this block is inserted an operating lever so closely contacting with the block in all positions that insects can not enter between the lever and the block. This lever and its operating mechanism, common to both forms of the device, will be fully described hereafter. The block 18 itself is of peculiar construction in that it comprises two hollow end supports 22 and 23 connected at their tops by a solid bar member 24 and at their bottoms by a plate 25 provided with a perforated lug 26 which is engaged by adjusting screws 27 and 28, adapted, when properly rotated, to move the bearing member

26 either one way or the other across the opening 29 within the hollow member 22, said movement causing the plate 25 to rotate about the screw 32 inserted through said plate into the boss or lug 34. This depending lug or boss 34 is circular in horizontal cross section as shown so as to form a bearing for the operating lever.

The operating lever for the window 12 is journaled upon the lug 34 by means of an enlarged circular ring or body portion 36 made hollow on its underside with two depending concentric circular rings 37 and 38 the latter bearing upon the lug 34, the former closely approaching the points 39 and 40 respectively upon the members 22 and 23 heretofore described. Extending from one side of the annular ring or body portion 36 is a lever 42 connected to the window in the manner to be hereafter described and extending from the opposite side of the ring portion 36 are two forked members 44 between which is journaled at 45 a lever member 46 tiltable in a vertical plane, its outer end carrying a weight or handle 47. Rotatably mounted in the space inside the ring member 36, between the rings 37 and 38, is an annular ring locking block 50 having upon its outer circumference a set of gear teeth 51. These gear teeth extend around the circumference of this ring or block through an arc of a circle at least equal to the arc of travel of the operating lever and preferably somewhat farther. The disk 50 carrying teeth 51 is rigidly secured by any suitable means such as screws 68 to the plate 25. These two parts may be made in one piece and the screws 68 omitted without departing from the invention. Meshing with these teeth 51 when the lever or handle 46 is in the position of Fig. 5 are teeth 53 upon a dog 54 rigidly secured by screws 55 or any other suitable means to the lever 46. This dog 54 is so proportioned and shaped that when the lever 46 is moved to the position of Fig. 6 the teeth 53 are out of mesh with the teeth 51. These parts are also so shaped that when the handle 46 is depressed to the position of Fig. 5 the teeth 53 are interlocked with teeth 51 thereby, because of the ring 50 being secured to plate 25, securing all parts rigidly in stationary position together. As the end 47 of the handle 46 is weighted as shown it will be seen that gravity causes these teeth to normally intermesh and that it is only by an operator lifting the handle 46 upward that the teeth will clear each other. As the plate 25 is pivoted upon the screw 32 and is adjustable about that screw by means of the handle 46 is weighted as shown it will readily be seen that the position of the lever 42 with reference to the window may be slightly adjusted in a horizontal plane. This adjustment is important whenever the car-

penter or other workman installing the device has so inaccurately attached the block to the window sill that the window is too tightly or too loosely closed when the mechanism is in full line position of Fig. 2.

In order to insure the device not rattling when attached to the window the end of the lever 42 is provided with a short tubular member 57 pivoted thereto by means of a screw 56, said tubular member 57 being split at 58 and inserted in slidable position within another tubular member 60 rigidly mounted upon the window 12 by means of any suitable brackets as 61 secured to the window, the member 63 connecting the tube 57 to the shaft 56 being adapted to slide lengthwise through a slot 65 in the tube 60. The result of this use of two split tubes one inside the other, is that when any pressure is exerted by the lever mechanism described either to open or close the window, either the inner tube will contract or the outer tube will expand a sufficient amount to allow the movement desired while at all other times they contact each other with sufficient pressure to prevent rattle between the parts when the wind or any other similar element engages the window 12.

In the complete operation of the preferred form of the device the operator attempts to locate the device on the window sill as shown in Figs. 1 and 2. If any slight adjustment is necessary to bring the window to accurate closed position the screws 27 and 28 are adjusted for the purpose as described. When the operator desires to open the window he raises handle 46 and weight 47 from the position of Fig. 5 to that of Fig. 6 thereby unlocking teeth 53 from teeth 51. He now moves the lever mechanism to any desired position and lets go of handle 46 when it, under the action of weight 47, drops to the position of Fig. 5 thereby locking the window. As the teeth 51 and 53 are relatively thin it only takes a very slight sidewise movement of the lever and handle to insure the teeth meshing and thus accomplishing the result just stated.

It is of course perfectly manifest that a spring may be used in place of weight 47 for causing handle 46 to move to locked position. A flat steel spring 69 is shown for this purpose in Fig. 11 but it is wholly unnecessary.

In the modified or cheap construction shown in Figs. 11, 12 and 13, the block 24 is entirely omitted. A base plate 71 is substituted for plate 25 and secured to the window sill 19 by the screws 72. These screws pass through elongated slots 74 by the use of which the plate 71 is adjustable about pivot 79 substantially as plate 25 is. A circular boss or lug 76 exactly like boss 34 is rigidly attached to this plate 71. The lever with its locking and operating mechanism, is exactly the same as in the preferred construction. It

rotates on the boss 76, as it rotates on boss 34, being secured in place by the washer 78 and screw 79 which as shown enters the window sill but this screw may be made shorter and not enter the sill. The insects are kept out by making the cut 80 in the screen frame 81 conform to the parts just described as shown at the left of Fig. 12.

The circular ring 83 on each base plate is merely a support for the ring 50 so that it and the dog 54 will be in the same plane when either one of the forms of the device are locked.

To sum up the foregoing specification it will be seen that this invention provides an operating lever which noiselessly engages the window which can be operated through the inner window or screen without the admission of insects, in which one hand of the operator can completely and fully operate the device, in which the device locks automatically, preferably by gravity and can be adjusted within the limits of the width of the locking teeth to any position of window opening and in which the locking device can be adjusted to take up slight errors in installing the device upon a window.

In order to render the device in a sense at least burglar proof, a locking plate 85 may be provided, having if desired a handle 86, to slip under the locking lever 46 and a portion of the block 50 and in close contact therewith, as shown in Fig. 14 thereby preventing the movement of the lever 46 to the position of Fig. 6 and the consequent operation of the window.

The claims are:

1. In a casement window adjuster, a lever having one end adapted to be operatively connected to a window and having a pivotally mounted handle at its opposite end, a pivot mounting for said lever, a fixed locking block having gear teeth thereon adapted to be engaged by said pivotally mounted handle, said locking block being housed within said lever so as to be concealed thereby in all positions of adjustment.

2. In a casement window adjuster, a lever having one end adapted to be operatively connected to a window and an operating handle at its opposite end, a pivot mounting for said lever, a fixed locking block, locking mechanism for detachably securing the lever and locking block together, and means for adjusting the position of the locking block with reference to the pivot mounting.

3. In a casement window adjuster the combination of an operating lever, a split tubular member pivotally secured thereto, another split tubular member within which said first mentioned tubular member slides and means for securing the second mentioned tubular member to the window to be adjusted.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

GEORGE L. WILKINS.

Witnesses:

DWIGHT B. CHEEVER,
C. J. CHRISTOFFEL.